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| 10/686,806 | 10/16/2003 | Bryan V. Hunt | 86266AJLT | 9649 |

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EXAMINER

CHEA, THORL

ART UNIT PAPER NUMBER

1752

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/686,806

Applicant(s)

HUNT ET AL.

Examiner

Thorl Chea

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 4-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claiming of the value of b^* at the optical density of 1.0 and the value of b^* at D_{min} is indefinite in the absence of providing the value of D_{min} and the value of b^* since the D_{min} is relative to the process and material. D_{min} is not a fixed variable or known value acceptable for all the photothermographic material. There is an indefinite value of b^* in the CIELAB color system.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1, 4-11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 96/15479 (WO'479).

See WO'479 pages 61, lines 25-28 to page 67, especially Dye 1 on page 63, and antihalation dye 2 on page 64; the material on page 83 to page 92, especially on 83, Example 4, lines 1-6 which discloses the use of the acutance dye in the topcoat layer and it has been determined that "the acutance dye" migrates into the coating layer during coating and drying; Dye 1 on page 84 and Dye-2 on page 85, lines 28; and unprimed blue tinted polyester support page 91 lines 20-30 on page 91. Page 34, lines 20-29 and pages 35 lines 1-9 disclose that the dyes are generally added to the photothermographic element in a sufficient amount to provide optical density of greater than 0.1 at λ_{max} of the dye. Generally, the coating weight of the dye which will provide the desired effect is from 5 mg/m^2 to 200 mg/m^2 , more preferably as 10 mg/m^2 to 150 mg/m^2 . For the purpose of good viewing of the image-developed film it is desired to for the dye to have visible absorbance less than ≤ 0.01 or to be bleached to a material having a visible absorbance of ≤ 0.01 . The dye may be incorporated into photothermographic elements as acutance dyes according to conventional techniques. The dye may also be incorporated into antihalation layers according techniques of the prior art as antihalation backing layer, an antihalation under layer or as an overcoat. See the adding the acutance dye in the photographic emulsion layer on page 24, lines 9-10; the adding the sensitizing dyes to provide them with high sensitivity in the infrared light on page 39, lines 10-15; the sulfur compound as chemical sensitizer on page 38 and the process of using the material as photomask on page 25, lines 25-29 and page 61, lines 1-23. The material is useful in medical diagnostic and graphic uses (page 2, first paragraph).

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The material exemplified in Example 4 contains infrared sensitizing Dye-1, PermanaxTM WSO as reducing agent, ButvarTM B-79 as binder and top coat layer containing acutance dye, wherein the acutance dye migrates into the photothermographic emulsion layer during coating and drying process. The amount of Dye-2 is 28 mg/m². This amount would provide to provide optical density of greater than 0.1 at λ_{max} of the dye disclose on page 34, lines 20-28. The scope of optical density of at least 1.0 at an exposure wavelength is within the scope preferred range disclosed in WO'469, and the worker of ordinary skill in the art would have used the preferred amount discloses in WO'469 from 5 mg/m² to 200 mg/m² to provide the imaging layer with similar absorbance. The material claimed in the present claimed invention has composition similar to that disclosed in the WO'469, and it would expected to inherently has similar characteristic after processing. In the absence of showing in the contrary, it is asserted either anticipated or found prima facie obvious to the worker of ordinary skill in the art at the time the invention was made. Moreover, the material taught in WO'479 is for use in the medical diagnostic, and it would have expected to have similar color tone after processing such as presented in the claimed invention.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/15479 (WO'479) as applied to claims 1-4, 9, 11 above, and further in view of Manian (US Patent No. 5,172,419). The method of digitizing a medical film image has been known in Manian. See abstract and columns 6-10, claims 1-12. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to form an image using a digitizing means taught in Manian to produce medical film, and thereby provide a process as claimed.

Response to Arguments

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7. Applicant's arguments filed May 22, 2006 have been fully considered but they are not persuasive of the reason presented in the office action on February 22, 2006.

The argument with respect to the rejection under 35 USC 112 paragraph is not persuasive. Applicants are referred to the copy of "Principles of Color Technology, pp. 31-74, by Roy S. Berns", especially page 67, pages 71 wherein the CIELAB system depend on 3 variable L^* , a^* and b^* . The value of b^* cannot be determined in the absence of L^* and a^* . Moreover, L^* , a^* and b^* value depends on other variable such as wavavelegth and CIE standard. See the 1924 CIE Standard Photographic observer on page 49, The 1931 CIE Standard Photographic observer on page 50; The 1961 CIE Standard Photographic observer on page 53; and the CIE color-matching function (CIE 1986) on page 55. Page 67 disclose L, a, b system which contains b axe form $[-b + b]$, i.e., blueness to yellowness, a-axe from $[-a, +a]$, i.e. greenness to redness, and L as lightness. There is an indefinite value of b depending on the selection of the CIE system, a^* and L^* value. Therefore, in the absence of providing a value of b, a, L and the model of CIE System, the claimed is indefinite.

The argument with respect to the rejection of claims 1, 4-11 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 96/15479 (WO'479) is not persuasive. The applicants' argument is based on the Declaration of Mr. Bryan V. Hunt on May 22, 2006 which show that the imaging layer absorbance layer of Example 4 of WO 96/15479 is 0.8. Mr. Bryan V. Hunt states that he believe that the data presented therein unequivocally demonstrate that Exemple 4 of WO 96/15479 is most similar to that of the comparative examples and would therefore, not be expected to have tone characteristic such that

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the value of b^* for the image and heat-processed photothermographic material at an optical 1.0 is greater than its value for b^* at D_{min} .

Supposedly, the material of the claimed invention is not anticipated by WO'479 since samples exemplified in WO'479 do not show the absorbance of at least 1.0 at an infrared exposure wavelength of from 700 to 14 nm to which said material is spectrally sensitive, the claimed material at least found obvious to the worker of ordinary skill in the art. WO'479 discloses to add the acutance dye and antihalation dye to the photothermographic element in amount sufficient to provide a transmission optical density of greater than 0.1 at λ_{max} of the dye, and the coating weight of the dye which provide the desired effect from 5 to 200 mg/m², preferably from 10 to 150 mg/m². The transmission optical density of greater than 0.1 at λ_{max} of the dye is believed to be associated to the amount of 5 mg/m². However, the amount preferred in WO'479 is from 10 to 150 mg/m², and the upper limit of the amount disclosed WO'479 would provide transmission optical density of greater than 1.0 at λ_{max} of the dye claimed in the present claimed invention. The Declaration fails to show that the amount preferred by WO'479 produce the transmission optical density outside the cope of the claimed invention. Therefore, the invention as claimed is still either anticipated or found prima facie obvious over WO'479. Moreover, WO'479 discloses the transmission optical density of greater than 0.1 at λ_{max} of the dye which includes the scope 1.0 claimed invention. The worker of ordinary skill in the art would have use a dye with an amount sufficient to provide that desired effect, and thereby provide a material similar as claimed. The results shown in the Declaration are also irrelevant to the claimed invention. The type of acutance dye, the antifoggant, 4MPA, sulfur sensitizer and BZT used in the Declaration are not claimed in the present invention. There is showing of

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unexpected results presented in the Declaration. The Declaration reflects the applicants' opinion rather showing the unexpected results of the claimed invention over the applied prior art.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1700.

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Tch *tcn*
July 27, 2006

Thorl Chea

Thorl Chea
Primary Examiner
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